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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/550,546

09/26/2005

Satoshi Watanabe

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EXAMINER

BAYOU, AMENE SETEGNE

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

01/16/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/550,546	Applicant(s) WATANABE ET AL.	
	Examiner AMENE S. BAYOU	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 3-5 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 6 is/are rejected.
- 7) ☐ Claim(s) 2,7,8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09/26/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

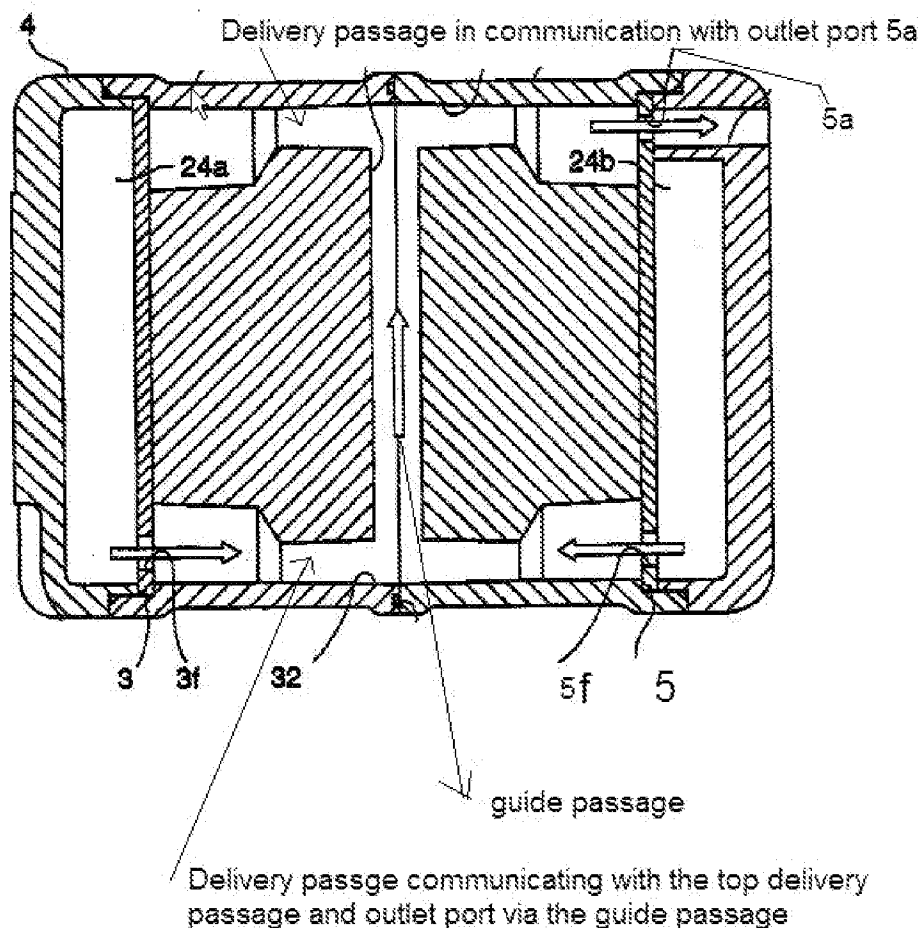
2. Claims 1 and 6 are rejected under 35 U.S.C 103(a) as being unpatentable over Arai et al'(US patent number 5800147) in view of Shibuya (US patent number 4544332).

3. In re claim 1 Arai et al'147 disclose swash plate compressor including:

- A reciprocating compressor ,in figures 3,7 and 8,comprising : cylinder block (1) having formed therein a plurality of cylinders (11), Pistons (12) that make reciprocal movement inside cylinders (11), a first cylinder head (4) fixed to one end of cylinder block (1) via a valve plate (3), a second cylinder head (6) fixed to another end of cylinder block (2) via a valve plate (5), a first delivery chamber (24a) formed at first cylinder head (4), into which a working fluid let out from a first compression space formed toward one end inside each of said cylinders is guided, a second delivery chamber (24b) formed at second cylinder head (6), into which a working fluid let out from a second compression space formed toward another end inside each of said cylinders is guided, plurality of delivery passages (shown in figure 7 and 8) formed at cylinder block, an outlet port (5a) located at cylinder block (6) or cylinder head which communicates between one of delivery passages and an external circuit, with other delivery passage that does not communicate with outlet port made to communicate with said first

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delivery chamber (24a) and said second delivery chamber (24b) and also made to communicate via a guide passage (labeled in figure below) with delivery passage in communication with outlet port (5a), delivery passage in communication with outlet port (105a, in figure 3) is made to communicate with at least either first delivery chamber or second delivery chamber (124b) via a constricted portion (105b) having a smaller passage section than the passage section (105c) at areas (i.e. 103a and 105c) where other delivery passage communicates with first delivery chamber (124a) and second delivery chamber (124b).



But Arai et al'147 fails to disclose

- The dimensions of constricted portion are set so as to achieve an area equal to or less than the area of a circular section with a diameter of 1.5 mm.

However Shibuya '332 teaches a double acting type compressor including:

- The discharge medium passes thru constricted portion (53a) and the diameter of the constriction is set such that the required degree of pulsation attenuation is achieved, in column 5, lines 35-40.

4. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the compressor of Arai et al'147 by selecting the proper diameter of the constriction (orifice) as taught by Shibuya '332 to achieve acceptable pulsation attenuation. Also please note that it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Please note that since figure 3 of Arai et al'147 is admitted prior art one skilled in the art can use this figure to combine with figure 7 Arai et al'147 and make the flow from one of the delivery chambers communicate with the delivery passage via a constricted portion in order to regulate the flow rate and avoid turbulence during mixing of flows.

5. In re claim 6 Arai et al'147 in view of Shibuya '332 as applied to claim 1 disclose the claimed invention:

Arai et al'147 disclose:

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- A constricted portion (5a or 105b) formed at a valve plate (5), in figure 3,9 and column 5, lines 64-66.

Allowable Subject Matter

6. Claim 2 dependent on claim1 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claim 7 dependent on claim1 is objected to as being dependent upon rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims
8. Claim 8 dependent on claim1 is objected to as being dependent upon rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims

Response to Arguments

9. Applicant's arguments, see page 6 paragraph 4-7 and page 7 , filed on 09/26/2008, with respect to the rejection of claim(s) 1 and 6 under 35USC 103 (a) have been fully considered and is persuasive. Accordingly the obvious statement for combining figure 3 and 7 of Arai et al'147 is included in this office action. In response to applicant's argument that the diameter of the constricted portion which is disclosed in the Gazette is 6-8 mm, and not about 1.5 mm,the examiner respectfully disagrees because it is clearly stated in Shibuya '332 column 5,lines 35-43 that the choice of the diameter is merely based on the required degree of pulsation and thus one skilled in the art would

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be able to choose the optimum range based on design considerations and experiments (as discussed in claim1 above).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amene S. Bayou whose telephone number is 571-270-3214. The examiner can normally be reached on Monday-Thursday, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art
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